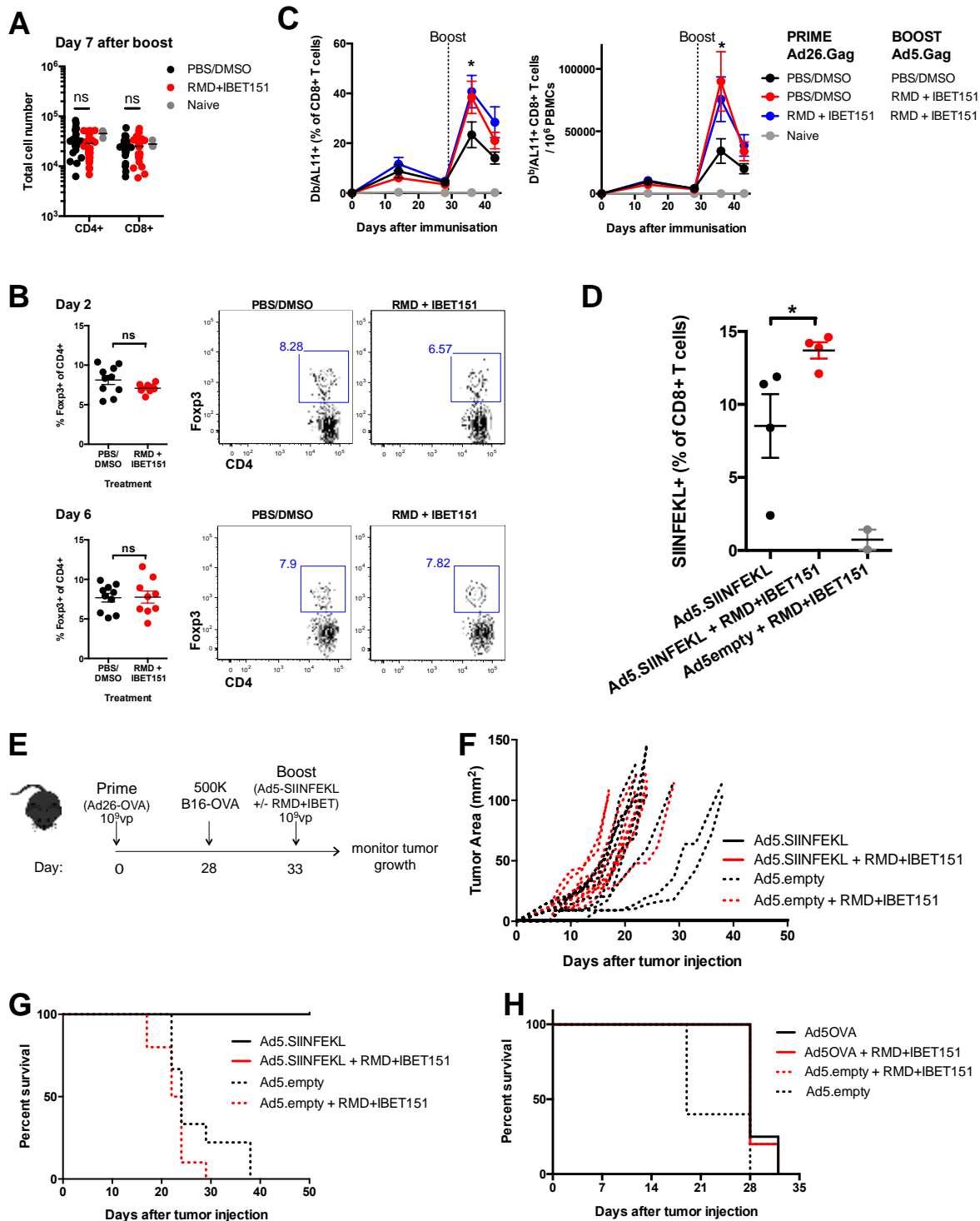


**Fig. S1.**

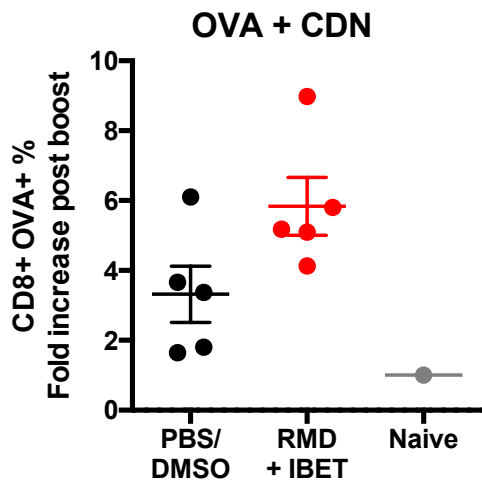


*Fig. S1. RMD+IBET151 increases adenoviral-vector elicited T cell responses and confers superior protection against B16 melanoma.*

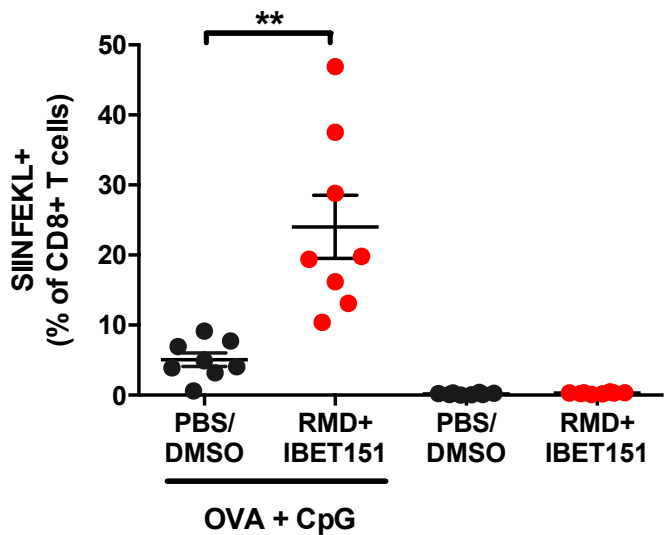
(A) Total CD4<sup>+</sup> and CD8<sup>+</sup> T cell number in the blood. (B) Frequency and number of Gag-specific CD8 T cells in the blood. (C) Frequency of SIINFEKL-specific CD8 T cells in the blood following Ad26.OVA prime and Ad5.SIINFEKL boost, with or without RMD+IBET151. (D) Frequency of Foxp3<sup>+</sup> of CD4<sup>+</sup> T cells in the blood following Ad26.OVA prime and Ad5.SIINFEKL boost, with or without RMD+IBET151. (E) Experimental outline of B16-OVA challenge. (F, G, H) Tumor area measurements and survival curves following B16-OVA tumor injection into primed mice and during therapeutic vaccination treatments. Each dot represents an individual mouse. n = 4-10 per group per experiment. Data are presented as means ± SEM. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001, Student T-test.

**Fig. S2.**

**A**



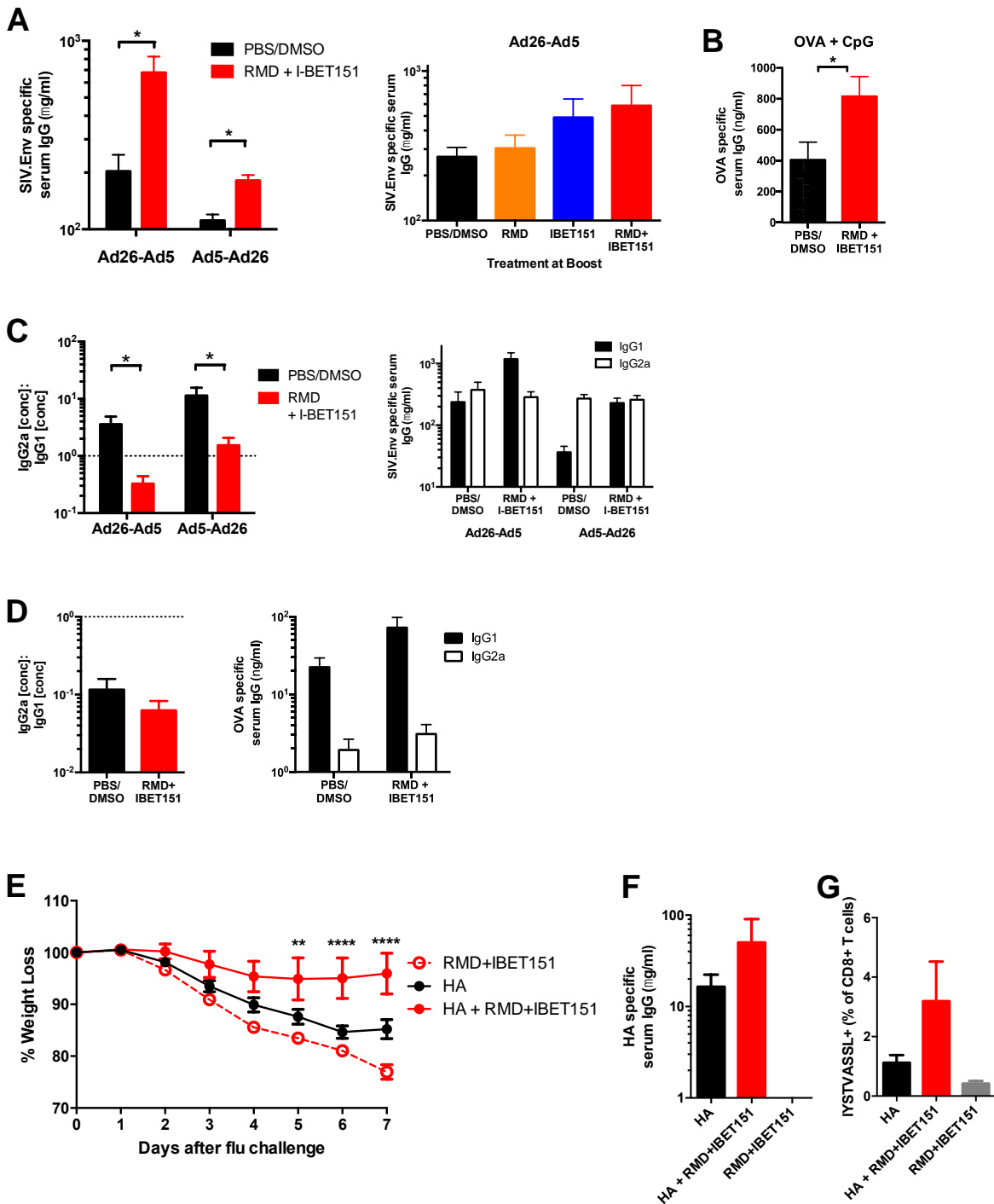
**B**



*Fig. S2. RMD+IBET151 increases protein elicited T cell responses.*

(A+B) Frequency of SIINFEKL-specific CD8 T cells in the blood following OVA prime-boost-boost, with or without RMD+IBET151. Each dot represents an individual mouse. n = 5-8 per group per experiment. Data are presented as means ± SEM. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001, Student T-test.

**Fig. S3.**



*Fig. S3. RMD+IBET151 administration augments vaccine elicited antibody responses and confers superior protection against Influenza infection.*

Serum (A) SIV.Env-specific, (B) OVA-specific IgG concentrations as measured by quantitative ELISA. (C) Ratio of SIV.Env-specific serum IgG2a and IgG1 concentration, and respective IgG2a and IgG1 concentrations, as measured by quantitative ELISA. (D) Ratio of OVA-specific serum IgG2a and IgG1 concentration, and respective IgG2a and IgG1 concentrations, as measured by quantitative ELISA. Dotted line represents equal IgG2a and IgG1 concentrations. (E) Weight loss of mice infected with H1N1 Influenza (strain A/California/7/2009) following HA protein vaccination with or without RMD+IBET151. (F) Serum HA-specific IgG concentrations, as measured by quantitative ELISA. (G) Frequency of HA-specific CD8 T cells (IYSTVASSL+) in the blood following HA protein vaccination with or without RMD+IBET151. n = 5-8 per group per experiment. Data are presented as means  $\pm$  SEM.